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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sughrue Mion Zinn McPeak & Seas		EXAMINER		
2100 Pennsylvania Avenue NW		GEREZGIHER, YEMANE M		
Washington, DC 20037-3202				
		ART UNIT	PAPER NUMBER	
		2144		

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/629,424

Applicant(s)

PARK, JOON-WOOK

Examiner

Yemane M. Gerezgiher

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-22 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-22 and 24-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Amendment received on 04/13/2005 has been entered. Claim 23 is cancelled and new claims 25-30 are added. Claims 1, 3-22 and 24-30 are now pending in this application.
2. The indicated allowability of claims 10 and 19 is withdrawn in view of the newly discovered functional teachings of the 1394 Trade Association entitled: "AV/C Digital Interface Command Set General Specification". See Art rejection applied under 35 U.S.C. 103(a) below.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 20-22, 24, 29 and 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In claim 20, the inventive entity recite, "a command structure for indicating ... the command structure comprising: a connection register information which represents an oPCR ..." See Claim 20 on Page 7. This claim is a non-statutory, because it is not tangibly embodied in a manner so as to be executable. Furthermore the claim is directed to a non-functional descriptive material.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

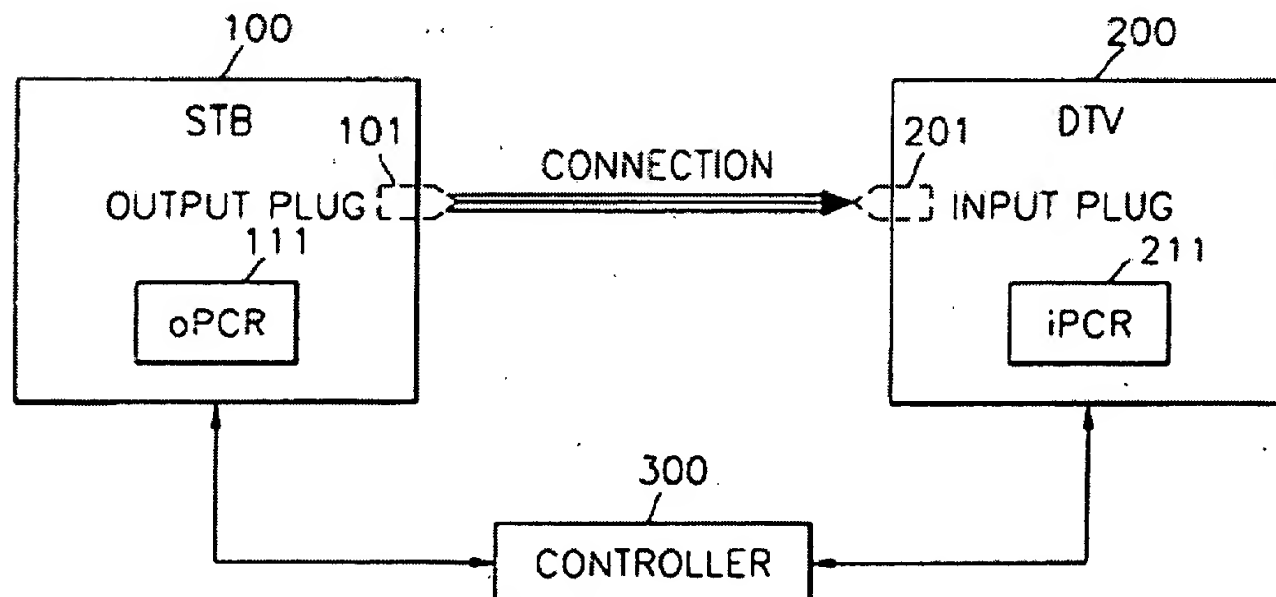
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-22, and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Applicant's Admitted Prior Art** (hereinafter referred to as **AAPA**) in view of the **1394 Trade Association** (AV/C Digital Interface Command Set General Specification).

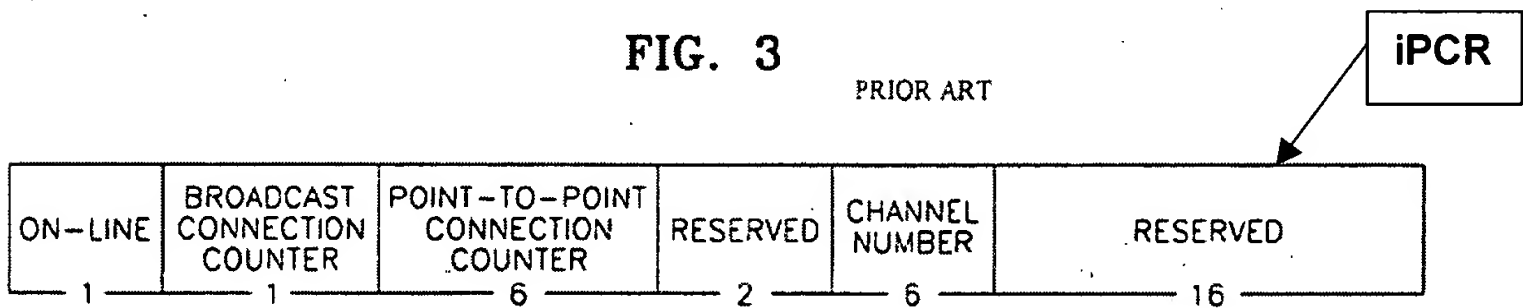
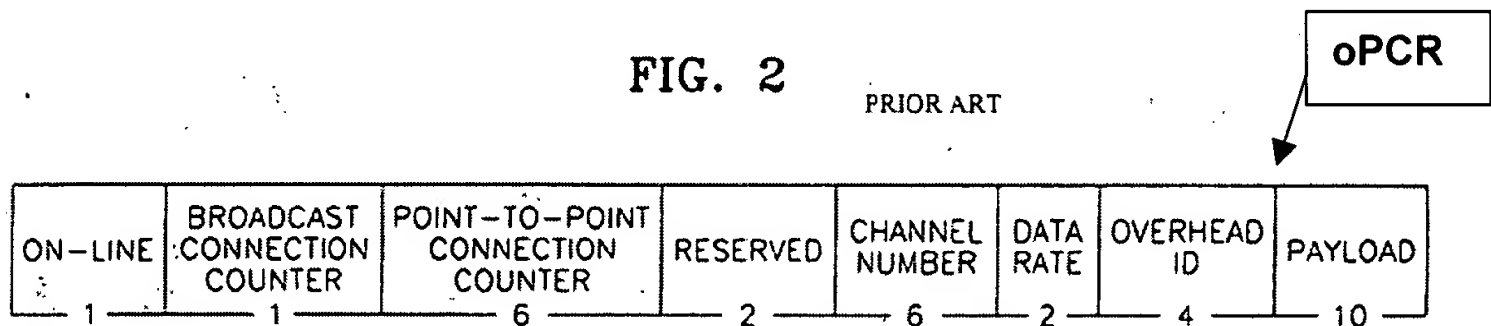
AAPA disclosed transmitting a management command from a controller/control device to other AV devices connected via digital interface (IEEE-1394 as defined by the IEC 61883, Claims 4, 12-14 and 22) specifying status change of the connected devices (See **AAPA**, Page 1 Line 22 through Page 2 Line 6 and Figure 1 also disclosed below).

FIG. 1

PRIOR ART



The control device has been a third device establishing a connection between first and second device (claim 3, See AAPA Fig. 1). As defined in the IEC 61883, the applicant also admits that the parameters of the iPCR and oPCR having therein the **on-line** bit indicating whether the corresponding output/input plug is online, which is value one or offline



with a value zero), the **broadcast connection counter** bit (indicating whether a broadcast-out connection to the output plug exists, which has a value one or not having a value zero), the 6-bit **point-to-point connection counter** (indicating the number of point to point connections to the output plug) the 6-bit **channel number** (indicating the actual number used by the output plug)...

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(Claims 5-9 and 25-30). See Applicant's disclosure on Page 2 Line 7 through Page 3 Line 12 and Figures 2 and 3 disclosed above).

The inventive entity correctly admitted that there exists an **“algorithm for informing a control device or the connected other device of this fact has been presented by defining a new control command in an audio-video/control command transaction set (AV/C CTS). Specifically when any change occurs in a device for transmitting or receiving real time data, a new control command is defined in AV/C CTS to indicate this change. According to the AV/C CTS, information is available regarding whether each input plug desires to receive any input information, and whether each output plug desires to output information”**. See Background information disclosed on page 3, Lines 13-21 and Figures 1-3. The applicant further admitted that the predetermined digital interface been IEEE-1394 (See Background information on Page 1, Lines 15-24) and a connection register information with identification information indicating an input and output plug where a connection is established and where the **output plug control register and input plug control register been registers for controlling a connection defined in an IEC 61883 format comprising bit fields representing multiple status changes (flag bits for on-line and off-line, a play load, data rate...).** See Background information pages 1-3 and Figures 2 and 3.

The AAPA substantially disclosed the claimed invention. However, AAPA was silent about the target devices responding to a communication command

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informing or notifying a control device about a change that occurs in a plug in the connection status parameter of the devices connected within. However, as evidenced by the teachings of the 1394 Trade Association “informing or notifying a control device a change that happens in the connection status parameter of the AV devices” was known in the art at the time of the invention. See 1394 Trade Association Page 35 Section 9.1 (Connection Usage command) through Page 46 Section 9.10 (Output Plug Signal Format command) and Page 17 Section 7.3 (Status Commands) through Page 18 Section 7.5 (Notify Commands). 1394 Trade Association further disclosed establishing or breaking connections if the on-line status indication bit is on or off (Claims 15 and 16, See Page 39-40: “The perm bit in a CONNECT status response frame indicates whether a connection is permanent (value 1) or not (value 0). Permanent connections within an AV unit are connections that cannot be altered by the CONNECT control command or deleted by the DISCONNECT command, in which case a REJECTED response shall be returned ...” and where the command structure comprising an operand designating bit fields of the iPCR and oPCR of the AV units which is compatible with AV/C set.(claims 21 and 24). See Figure 9-7 on page 40.

Additionally, as recited in the newly amended limitations (“an operand for designating connection status parameter bit field of oPCR or iPCR and the control device desiring to be notified of a **future change of the connection status parameter bit field specified in the connection management**”

command” See the amendment made to claims 1, 11 and 20 on pages 2, 5 and 7), as evidenced by the teachings of the 1394 Trade Association, these limitations were well known at the time the invention was made. See Section 7.5 “Notify Commands” on Pages 18-19. The teachings of the 1394 Trade Association further disclosed in a case where multiple connections are overlaid on the same source plug, removing or deleting a connection when any change occurs in the PCR of the devices using a disconnect command (as in claims 10 and 17-19) was disclosed. The 1394 Trade Association related to “DISCONNECT command” in preventing or disconnecting connections when plurality of connections overlaid on the same source plug was disclosed and when such event occurs to notify a user to stop devices other than a limited connection or to simply drop connection or to prevent the additional device from receiving information is an arbitrary choice when implementing the teachings of the 1394 Trade Association (“DISCONNECT command”). See Section 9.7 “DISCONNECT command” on Pages 43-44.

Therefore, it is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of the 1394 Trade Association related to AV/C Digital Interface Command and have modified the AAPA in order to facilitate the connection management of the AV devices connected with digital interface (IEEE-1394-1395) by allowing changes for establishing and deleting connections in the

input and output plugs according to the status changes in the plug registers.

See Pages 37-40 Section 9.2 (CONNECT command).

Response to Arguments

7. Applicant's arguments filed 04/13/2005 have been fully considered but they are not persuasive.

The inventive entity argues that the command structure of claims 1, 11 and 20 as amended ("the control device to be notified of a future change ..." See Column applicant's remark on page 12) is not disclosed by the teachings of the 1394 Trade Association. However, the examiner respectfully disagrees with the applicant's contention. The 1394 Trade Association clearly disclosed a control device been notified of a **future** change on a connection status. See Section 7.5 "Notify Commands" on Pages 18-19. Furthermore, the applicant argues that the cited reference do not teach or suggest that "the connection status parameter bit field is one of an on-line bit field, a broadcast connection counter bit field, a point-to-point connection counter bit field ..." See Applicant's Remark on page 13. Once again the examiner respectfully disagrees with such allegation. Applicant simply contradicts with the already admitted prior art. See Applicant's disclosure on Page 2 Line 7 through Page 3 Line 12 and See Figures 1-3 designated by a legend "**Prior Art**" also incorporated above).


Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane M. Gerezgiher whose telephone number is (571) 272-3927. The examiner can normally be reached on 9:00 AM - 6:00 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached at (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yemane M. Gerezgiher
Patent Examiner


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